

## **ABSTRACT**

There is provided a method of performing a timing soft error check on a simulated circuit. The method comprises creating a critical-path circuit or using a full-chip circuit to be analyzed of the circuit. Next, the circuit is simulated based on an initial minimum optimization parameter and an initial maximum optimization parameter. A maximum and minimum primary criterion parameter are calculated for each of the minimum and maximum optimization parameters. If the minimum and maximum optimization parameters do not indicate the same status (i.e., both succeed or both fail), then a new current optimization parameter is determined. The circuit is then simulated using the new current optimization parameter. If the simulation is successful, then a timing soft error check is performed. If the simulation is not successful, then it is determined if the primary criterion parameter is converging. If the primary criterion parameter is not converging, then the current optimization parameter is set to a new value.